

A NEW CALENDAR FOR A NEW WORLD

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THE task facing those who are selling a better calendar to the world is not unlike the job that faces the man who is attempting to sell a new and better plow to a successful farmer.

For years this farmer has used an old, faithful, but antiquated plow. He has tilled his ground, raised his crops and sent his children to school. It has helped him pay his debts and has made him a respected member of his community. The long hours he has spent behind the handles of this plow, breaking the good earth, growing the crops, are long, tedious, tiresome hours; but they have become a part of his routine of life. He walks and struggles and heaves his muscle-racking way, because he knows nothing else but this type of cultivation.

Then enters the man selling a new, better, more efficient and comfortable type of cultivator. It is pretty difficult to convince that particular farm owner that his faithful plow is inadequate; that the implement that came down to him from his father should be thrown away. The salesman must make him conscious of its inadequacies, of its costs in time, money, effort and efficiency. Then, having been made dissatisfied with his present implement, he will consider and with more enthusiasm accept the newer, better, more efficient plow as something necessary to his future economy.

And so it is with the present calendar. The world has done very well with its calendar in spite of its vagaries during the 361 years of its existence. And because we have better things and a better life, we have become pretty well satisfied with our method of doing things and our existence under this obsolete time-plan.

It is only when we are made to realize the inadequacies of the present calendar as it affects the economic life and the social existence of each one of us that we, as the farmer with his antiquated plow, become conscious of the burden we are unwittingly carrying; just because it is something our fathers and their fathers before them were satisfied to use.

CALENDAR REFORM

April, May, June
1943

C O N T E N T S

EDITORIAL	49
PROPER TIMING PLAYS PRETTY TUNES ON CASH REGISTERS	
Walter R. Greenlee	51
HUMANE-SCIENTIFIC OUTLOOK GREATEST HOPE AGAINST WARS	
Prof. Clyde R. Miller	55
THIRTEEN "SCARLET DAYS" BRING WORRY TO INSURANCE MEN	
Alson C. Patton	59
THE NEW WORLD CALENDAR A GOOD-WILL DELEGATE	
Dr. Mary E. Woolley	62
PEOPLES MANDATE COMMITTEE COMMENDS WORLD CALENDAR	63
THE FIFTH FREEDOM	
Thomas Wayling	64
DEATH TAKES TWO 13-MONTH PIONEERS	
Emerson Brewer	68
THE MOON, THE CALENDAR AND FARMING	
Prof. E. R. Gross	69
WHAT WE DO TODAY IS VITAL	
Elisabeth Achelis	72
CALENDARS AND CALENDAR REFORM	
Dr. W. E. Castle	73
WANTED—A CALENDAR AS STABLE AS A CLOCK	
Henry M. Hyde	79
ASTRONOMY'S CONTRIBUTION	
James L. C. Ford	82
ALABAMA TEACHER SEES WORLD CALENDAR AS GREAT AID TO SCHOOLS	
W. C. Parsons	85
INCREASED MANPOWER NOT SOLE ANSWER TO INCREASED WAR OUTPUT	
Emerson Brewer	88
EDITORIAL DEPARTMENTS	91
CONTROLLERS INSTITUTE ADVOCATES EARLY ADOPTION	93

EMERSON BREWER, Editor

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PROPER TIMING PLAYS PRETTY TUNES ON CASH REGISTERS

By Walter R. Greenlee

Fortune Magazine refers to the writer as follows: Walter R. Greenlee was the man . . . he is that almost vanished type, the midwestern go-getter of the Coolidge vintage—small, small featured, fortyish, forever communing with dictaphones (he even takes one in escort when he travels) . . . and given to big cigars, spats, and dark blue shirts with ties to match . . . to the circus that is Schenley, go-getter Greenlee and his dictaphone have contributed many an act. Grover Whalen once said of him . . . “You can well be proud of the record which you have made. Few men have demonstrated such fine talents in executive, sales and advertising ability in so short a time as you have and with such marked success.”

SUCCESSFUL advertising depends on successful coordination. Every factor in the success of a sales effort must be in motion at the time an advertising and sales campaign begins.

The manufacturer's salesmen must have been “sold” on the advertising and sales promotion effort; the wholesalers must have been sold on the idea of the campaign, the worth of the product and the profit possibilities of the article they are being asked to stock; their salesmen, the men representing the wholesaler, must be as enthusiastic as to the profit possibilities as is their employer.

But what is most important of all, the retailer and the retailer's salesmen, those who ultimately are to represent you when the buying public asks for the product you are advertising, must themselves be thoroughly sold on the worth and the economies of your product.

This appears to be an involved process of sales promotion and sales effort. And it is involved. It means careful planning, meticulous attention to detail, and a thorough knowledge of the fundamentals of sales and advertising as these affect all of their various strata of distribution.

While the advertising “idea” or theme is basic, a fuller dividend is assured from the advertising dollar when the sales promotion and adver-

tising efforts go forward as a carefully directed and cooperative team.

Speaking in the broadest sense, the profit motif is what makes the wheels go round and makes the cash register ring. The consumer must be convinced that what you offer for sale has greater value than that of a competing product. The wholesaler must be convinced that he will make more sales and easier sales, or greater profit per dollar on your product than on another product he has or can have in his warehouse.

The retailer, in peace-time at least, with his shelves loaded with other products and his money tied up in competing brands, must be made to feel that you are offering him a greater opportunity for rapid sales than is your competitor. And, finally, the retailer's salespeople must be given a sales angle better than that furnished by the firm that is pushing their product in competition to yours.

All of these things are possible if the product is right, if the package is right, and if the "mark-up" or opportunity for profit is carefully developed.

Regardless of the type of product offered for sale, a rigid formula is followed whether the article you sell is for the kitchen, the living-room or the bedroom. If it is a package product, there are certain rules which must be followed and strangely enough they vary but little regardless of what the package contains.

You, the sales manager of a company, must sell your product to the people who are to distribute it as thoroughly and as completely as you hope they will sell it to the public. This, I find, is best accomplished by means of sales portfolios and face-to-face meetings. The first meeting takes place in your own office, a sort of closed meeting, attended by the men in your office who are most closely associated with the campaign.

Across your desk, your sales manager, your advertising manager, the comptroller, and their assistants are given the full message, and it is there that they get the whole story with all the details of volume, quotas, costs and unit-profits carefully worked out.

This is the first of many such meetings, the others varying only as the personal profit story varies, all the way down the line to your divisional managers, to your wholesalers and to those whom you hope will become your wholesalers. Then, with this impetus carefully planned, back of the ball, the story goes on to the retailer, and the retailer's salespeople.

While the formulas for getting the most out of your advertising dollar remain the same, it does not necessarily follow that you can paint the sales picture of the nation with a broad brush. Localities have their peculiarities, sections their "sacred cows" and even cities differ, so the plan must be elastic yet coherent.

The methods used in Minneapolis may differ from those you follow in

New Orleans, but there is one common denominator throughout it all. And that is correct timing.

There is as much need for care in the timing of these various efforts in sales promotion as there is need for timing the arrival of parts on a factory assembly line. Timing is the answer and that brings us to one of the toughest parts of the whole program.

And that is the coordination of these efforts in relation to days and dates. Magazine advertising must be scheduled many weeks in advance. Printers need time to do their work, and before any of this can be definitely placed on your sales promotion time-sheet, the artists, copy men and merchandisers must have had an opportunity to complete their part of the work.

In my office I have a large calendar that shows three months at a time, which is constantly in front of me as I rough out the general plan. It is as definite a part of the plan as the paper on which the whole scheme is written. Without it, everything falls apart.

Food advertisements in newspapers must appear on a Wednesday, Thursday, or Friday, as most home shoppers fill the stores on a Thursday, Friday or Saturday. That means careful calendar-reading because, should a holiday occur on either of these days, changes, in the majority of instances, must be made in your time-planning. Changes in advertising dates mean changes in sales-meeting dates, and there are, many times, changes in delivery dates. Inasmuch as the sales plan is perfectly coordinated, a holiday, a short month, too many Sundays or Saturdays, play havoc with the whole idea.

The wandering holidays must be watched with an eagle eye, and the months with five Saturdays and Sundays must also be carefully considered in planning plant-production; they certainly cannot be lost sight of by the shipping department; and to the printer they are always a headache.

Unless the work-days in each month are carefully considered when the bids are figured and made, a fifth Saturday, a fifth Sunday, a forgotten holiday that breaks awkwardly into the week, may mean overtime work; and overtime work on a big job may spell the difference between profit and loss, between promised delivery and delayed delivery.

It was the relief promised from these headaches by the regularity of The World Calendar of 12 months and equal quarters that first interested me in this simple rearrangement of our present worrisome way of keeping track of days and dates.

To an advertising man, to a man in an executive sales position, to men who must keep promised delivery dates, the perpetual World Calendar will pay a dividend that can be figured in actual dollars and cents. There is not only a dividend, but a bonus as well, because plans once made can be followed year after year without the need of sitting with a calendar always

before you. A definite sales pattern has been established, a skeleton structure upon which to hang all future plans.

The World Calendar is an actual, tangible tool in any sales-promotion kit. Were it in general use, the harassed sales manager, or advertising man, could compare period-accomplishments surely and conclusively. Let us see what faces these people today.

Quotas must be set and anticipated; sales must be estimated; sales accomplishments must be followed; the treasurer wants to know the volume that can be expected. So you put in a call to your home and explain to the "little woman" you won't be home for dinner.

And there with your assistants you sit, buried in a pile of last year's sales reports, while the hands of the clock crawl slowly forward, trying to figure with calculations that bring gray hairs why sales of a particular week last year were lower than those of the same week this year. Maybe a fifth Saturday brought greater volume that week; maybe a holiday cut down volume; maybe five Sundays caused disruption in carefully planned sales-time. But, anyway, every week of last year's sales volume must be carefully checked as to available sales days, fifth Saturdays, or national, state or local holidays, which you forgot to take into consideration.

Wearied, bewildered and confused, you finally decide roughly what the sales accomplishment should be and the quotas to be fixed. Again, this means constant reference to the wandering holidays and to the long 31-day months, the intermediary 30-day months and the short 28- or 29-day month.

With The World Calendar in operation, such sessions would be unnecessary, because the quarters, year in and year out, always remain the same, the same number of days exist in the various quarters, and the same days and dates always agree. Quotas, figures for comparison, plans once established, remain for all time a certain and sure basis for comparison. The calendar is at last a reliable and dependable timepiece and measurer.

The lot of a sales manager, or of an advertising manager, too, is not necessarily a happy one. An unusually successful and resultful campaign becomes, rather than an individual success, only the bottom figure or goal to shoot at and to exceed in the next campaign. As one successful and highly profitable campaign follows the other, the "sights" are always raised, so that it behooves all of us, who have chosen this highly hazardous and hectic profession, to surround ourselves with the best tools and short-cuts we can uncover. Only so can we continue to hit the sales bull's-eye.

And one of these necessary tools for continued successful operation, and by no means the least, is that which establishes accurate timing of your shots with a certainty and the least opportunity for error. For my advertising dollar, The World Calendar fits the bill admirably.

HUMANE-SCIENTIFIC OUTLOOK GREATEST HOPE AGAINST WARS

*By Professor Clyde R. Miller, Teachers College, Columbia University,
New York City*

We asked Clyde R. Miller to give us some facts about his background, and the following is an excerpt from his letter to us:

"I have been a member of the staff and faculty of Teachers College, Columbia University, since 1928. In addition to my work at Teachers College, I have given courses in School Administration at Ohio State University, and in Journalism at Cleveland College of Western Reserve University. For some four years I was executive director of the Institute for Propaganda Analysis and formulated its educational program which was a scientific-humane approach to the great issues of our time.

"For four years I have been helping the public schools of Springfield, Mass., with an experiment in the humane-scientific approach—in an effort to prevent or end attitudes of prejudice based on social, economic, and racial differences which has had measurable success.

"I have written rather extensively on public opinion and propaganda; particularly, as these are factors in popular education."

THE world is in an awful mess. Men are destroying one another by the millions. All the power of modern science is being brought into play to facilitate and increase the destruction. Entire nations are being decimated by malnutrition and disease. That same power of science which within the past 300 years had remade our physical world, to increase the fruitfulness of the earth, to eliminate the scourge of disease and contagion and thus to make human life pleasanter and longer, is now being applied to destroy life.

The source of our present affliction lies not within science itself but rather within the ignorance and greed and inhumanity of man. At the center of this source lies ignorance which is to say lack of science or lack of knowledge, for science is knowledge.

We must not therefore blame science for our present catastrophe, but rather a lack of knowledge as to how to apply it to the field of human

relationships. In short, we need more science; and we need, desperately, more knowledge of how to apply to the field of human relationships the scientific principles which have remade our physical world.

But we shall not achieve, through science alone, the world of our dreams, a world of peaceful cooperation. Something more is required and that something more is the humane, or religious, or ethical, or moral motivation—call it what you will—which holds that men are more important than things, and that life should be increasingly worth living—for all peoples everywhere.

We have gotten into our present dire trouble because men have failed so signally, in all of the nations, first, to grasp the fact that the scientific method can be applied to human relationships to prevent war and increase wholesome cooperation, and, second, to lay hold of the ethical principle that we are morally bound to make this application. If we don't make it soon and in a manner to affect the thinking and emotional conditioning of millions of people, this generation can look forward to a third and more terrible world war.

Our task, thus briefly outlined, points to the past and present failures alike of many of our leaders of science, religion, and education. It challenges our present leaders to undertake at once a reorientation of education to the end that schools, everywhere and quickly, will begin to apply the scientific principles of fact-finding to human relations and with the same efficiency with which they have been applied to material things.

This is not to say that these principles have not been applied to human relationships. They have been applied, and often to good ends. The simple Christian ethic of the Golden Rule represents one application. It embodies the basic axiom that life ought to be worth living. Similarly, the principles of science have been applied to human relationships by educators like Horace Mann, William James, William Graham Sumner, Andrew Dickson White, H. G. Wells, and John Dewey. They have sought to free people from the malignant power of ignorance, superstition, and selfishness.

But these principles of science, carried over into the field of human relationships, have been perverted, too. Throughout history, charlatans have taken shrewd advantage of their knowledge of the mental and emotional reactions of men, to use that knowledge for selfish ends. In modern days we have seen the principles of psychology so utilized in advertising appeals as to create vast markets for worthless or harmful patent medicines. We have seen a vast amount of skill and energy applied to condition millions to form habitual desires for products which, like certain cosmetics, may be at the least innocuous, or which, like intoxicants, may be harmful to many.

In the political field, we have seen the rise of Adolf Hitler. He came to power precisely because he was able to apply to the field of human rela-

tionships definite scientific knowledge of mental-emotional conditioning—knowledge which every expert social scientist possesses.

Hitler perverted this knowledge. He was able to do so because some leaders in business, politics, journalism, religion, and education had failed to create a type of education which could cause people everywhere to recognize and despise such perversion.

Part of this failure lay in the notion that science and education must be wholly "objective." This notion is now known to be nonsense and worse; it leads to the perversion of science for evil ends. Life ought to be worth living, irrespective of whether people have red hair or black hair, blue eyes or gray eyes, white skins or yellow skins. If we accept this principle (and it must be accepted if World War III is to be prevented) then the benefits of science must extend to all peoples everywhere. And scientists and educators must be motivated to work for general human welfare. Science and education cannot be restricted to create a world for the primary benefit of Hitler's pure Nordic race and the exploitation of other races. They cannot be restricted to maintain benefits for followers of one religion at the expense of followers of another.

Application of this factor involves enlightened selfishness, if you want to call it that. A method to prevent cholera, say, cannot be restricted to isolated groups and areas. People travel and contagion travels. There is a moral obligation, therefore, to put science to work for everybody, everywhere, and not to pervert it for anybody's selfish purposes. If there's any place today where unselfish application of science is needed, it is in the field of human relationships.

It is right here that education needs to be made over. H. G. Wells put it effectively a few years ago when he said we were in a race between education and catastrophe. Well, catastrophe won, didn't it?

Will it keep on winning? I think not. I see a lively hope that men are beginning to learn by experience. It is a painful way to learn, an agonizing way, but it may make men readier to accept the easier way of science combined with human decency. As a practical measure, what should be done to make education? Well, a number of things need to be done. I see two as most important.

The first is to get children and adults onto a common denominator of moral values. They need to know that life ought to be worth living; that everybody, everywhere, needs air, food, water, clothing and shelter to sustain life psychologically. They need to know that science offers a way to provide an abundance of these physical requirements, and that restriction or perversion of science can bring only disaster.

The second thing which should be done is to give children and adults an historical perspective of the development of science through history. In doing this, people will come to know that the great pioneers in the physical

sciences met with even greater ignorance, fear, superstition, and persecution than that which faces the pioneers in the social sciences today. They will observe the readiness of so many of today's leaders to denounce and forbid the dissemination of the knowledge of human relationships just as leaders of a few hundred years ago denounced and forbade the teaching of chemistry, physics, and the Copernican astronomy.

Some may ask: Is it not a dangerous venture—this attempt to give historical perspective, this effort to apply scientific methods in the field of human relationships for moral, humane ends?

The answer, of course, is "Yes." But it is vastly more dangerous *not* to do so. Our present war is proof of that; and the possibility of an even greater war to follow is further proof.

The approach, however, is not nearly so dangerous as many teachers may think. That is because we are now accustomed to the physical sciences. Men are no longer burned for saying that the world is round or that there are no such things as witches.

As a central part of a teaching program which relates the acceptance of the physical sciences to the desired but not yet achieved acceptance of the social sciences, I would advocate the thorough consideration, in all schools, of the history of man's effort to measure time, the history of calendars, because it affords a perfect example of the union of the social and physical sciences, and of the utilization of science to make life more livable. It is clear and simple. Everybody can see, in the history of calendar-making, how science can deal with material things and humanity at one and the same time.

As one studies calendar-making through the ages, he sees the interrelationships of astronomy, mathematics, navigation, agriculture, religion. He sees how science, applied more and more to the calendar, has increasingly served man's needs and convenience. As he observes today's various calendars in use throughout the world, and particularly our own calendar, he is aware of how it makes life more livable and convenient for everybody, irrespective of race, nation, or state of birth; he becomes aware, too, of its imperfections. He learns to appreciate the need for creating a calendar, more rational and scientific than the one in common use, to eliminate the present inconveniences and inefficiencies. It is plain that lack of science and of rationality causes these inconveniences and inefficiencies.

More science, more skilfully applied, and applied to the end of making life less inconvenient and less inefficient, is obviously needed, our students will discover, as they study the calendar in relationship to man's needs.

I am not arguing here for any particular plan of calendar reform. I am saying that the study of man's efforts to measure time is as good an introduction as I know to that humane-scientific outlook which provides our greatest hope for a more rational and decent society tomorrow.

THIRTEEN "SCARLET DAYS" BRING WORRY TO INSURANCE MEN

By Alson C. Patton, Associate Actuary, Paul Revere Life Insurance Company, Worcester, Mass.

SINCE the seventeenth century it has been the duty of some person or of some division connected with insurance companies or associations to compile tables of risks. These give a pretty accurate picture of what will happen under any given set of circumstances when broken down into their detailed parts over a successive period of years. The practical part of an actuary's business life covers the theory of compound interest, the compilation and analysis of tables of mortality, sickness and accidents, and the frequency of happenings that have to do with people, with things or with events.

An actuary deals in facts, in established figures, in proven statements, and in actualities. These, when accumulated over the years and in sufficient number, can be depended upon, unless the circumstances are most unusual. In other words, "actuary" literally means the quality of being actual. The compilation of these tables of life expectation, or these tables showing the frequency with which certain things happen under a given set of circumstances, has become an exact science. The Actuarial Society of America is a scientific organization founded in 1889, and was established for the promotion, development and elevation of this science.

What with the uncertainties of war, with hitherto unprecedented government commitments and with thousands upon thousands of young men being called into service, the insurance companies have, from both a sales and executive standpoint, been faced with many new and unexplored decisions of policy.

Our problems have become greater and more involved. Problems that face sales divisions, with millions of men, formerly prospective buyers of insurance in government uniform, are unprecedented.

Before the war there were approximately 200,000 field men under the direction of the agency departments. Their job was servicing life insurance policies already sold and maintaining their volume of sales from eligible prospects. The uncertainty of the present calendar makes it very difficult for these men and their superiors to plan their work as thoroughly as it rightfully should be planned. Now, with fewer men to do the work,

this section is doubly handicapped.

"Servicing" includes not only the task of keeping the insured pleased and protected, but also to assist the insured during times of stress, when, through careless planning or unanticipated circumstances, the policies might be permitted to lapse. In both these instances the date on which the contract was made and the date of the insured's birthday are matters of definite importance.

The year's half-way mark which establishes the difference between a higher premium and the premium being charged at the lower age is of importance. Many "on-their-toes" agents keep careful records of these dates and make it a point to approach the insured prior to this half-year point with the suggestion that he buy more insurance at the lower rate. The fluctuating days in our calendar make this particular job one of unusual difficulty.

There are certain days that we have learned to shun. This does not apply only in my end of the insurance business but in the sales division as well. These days are marked off or circled on our present calendar with definite bright red "X's" or with wide and definite rings of red. They are what we call "red-letter days," but not red-letter days in that they hold any joyful significance.

Not infrequently life insurance policies are issued on the Quarterly basis; and if issued on a Semi-Annual or even an Annual basis, the insured is privileged to change his policy to a Quarterly basis of payment. And therein lies our trouble.

Should a policy of either the Quarterly, Semi-Annual or Annual type be dated January 31, the quarterly premium would fall due on the 31st day of April, the 31st day of July and the 31st day of October. Here enter the complications. There is no April 31, and consequently no policy should be dated January 31, nor should it be dated July 31 or October 31, for eventually a premium date might fall on April 31.

The absence of a 31st day in April has, in a manner, besmirched the character, standing and dependability of January 31 as well as July 31 and October 31. Consequently, three good and dependable dates are "lost."

In like manner, due to the fact that February never has a 30th or 31st day and only has a 29th day once in four years, a cast mark falls on the foreheads of the following dates:

May 29, 30, 31

August 29, 30, 31

November 29, 30

So it comes about that eight more dates must be crossed off or circled in red on the calendar.

But we haven't stopped emasculating the calendar. Because there is no June 31 or September 31, the independability of these two months must

also spoil March 31 and December 31. Adding up these "X's" or red rings on our calendar, we find that there are 13 "scarlet days," all of them lost to an insurance company just because of the irregularities and the vagarious character of our present calendar.

While we are of necessity unusually careful about the "date" which we assign to life policies because of the irregularities which would result, our office does not cease to function on the 13 scarlet days. It follows that the agents in the field should not be encouraged to do so. As a matter of fact so definite is the rule no one other than the policy typist need have any concern. To her it becomes second nature and she need only take care not to place any of these special dates on the policy.

Because of all this it is seldom that a policy is actually typed on the day which coincides with the "date" the insurance purports to become effective, and from which date future premium dates are determined.

A common phrase in the life insurance business is "as compared with the same period last year." In this comparison, every department of insurance business from the agent's first contact with the prospective policyholder through every department, continuing until the policy is paid, this phrase and the job of making it real presents its continued headache.

The irregularity of the present calendar with its unequal quarters, with one half-year consisting of 181 days and the second half-year consisting of 184, "as compared with the same period last year," adds hours of work to every department of this highly factual business.

With the perpetual World Calendar of 12 months and equal quarters in active operation, all of these irregularities and disturbing factors and wasted "calendrical" hours would be eliminated.

The World Calendar regulates the 12-month year in multiples of halves and quarters. Each quarter is the same, consisting of three months of exactly 91 days. The first month has 31 days and the succeeding two 30 days. There will be exactly 13 weeks to each quarter, 13 Sundays and 78 weekdays. Each month has 26 weekdays. Each quarter will begin on Sunday and end on Saturday. Under this new plan, the day which is the stabilizer of our present maladjustment, the 365th day, now December 31, would become the new Year-End Day, December W, a World Holiday. Once in every four years, the extra day which now brings the month of February to something approaching equality with other months would fall as an extra Saturday between June 30 and July 1, to be known as Leap-Year Day, June W, another World Holiday.

It can be readily seen that with this established regularity the phrase, "as compared with the same period last year," takes on a real and definite significance which lends itself not only to greater ease of operation but to definite and steady periods of comparison. And the present 13 "scarlet days" will no longer stand as "Pariahs" in our calendar of time.

THE NEW WORLD CALENDAR

A GOOD-WILL DELEGATE

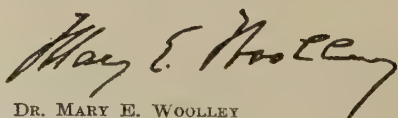
IN the world reconstruction which must follow the tragic today the Americas will play a leading part. Anticipating this responsibility the Nations of the Western Hemisphere realize the importance of unity of purpose and effort, and have gone further in the development of understanding and good will than ever before in their history.

Among the possible "Good-Will Delegates," is the new World Calendar which has already gained the official approval of six Latin-American nations—Brazil, Chile, Mexico, Panama, Peru and Uruguay. The Chairman of the Argentine Calendar Committee, Vice Admiral José Guisasola, suggests that "it would be a splendid gesture of hemispheric solidarity, in which we are all so interested at this time, if the countries of North, Central and South America were to show the way to the rest of the world by adopting The World Calendar of 12 months and equal quarters."

The time of changing the calendar with the least confusion, when a date and day of the present calendar coincide with the same date and day of the new, occurs Saturday, December 30, 1944.

It is, therefore, important that this new "time-plan" should be brought without delay to the attention of leaders of civic and educational associations as well as of government officials, that there may be cooperation in securing approval. Many organizations—scientific, educational, business and civic, including two powerful groups of women, the General Federation of Women's Clubs and the National Federation of Business and Professional Women's Clubs—have officially endorsed it.

The advantages are many. A new civil calendar "that would bring order out of disorder, stability out of confusion, equality out of inequality, and coordination out of discord in our time-system," is a task worthy of our best effort and a help toward realizing the same qualities in other directions. Elisabeth Achelis, President of The World Calendar Association, has expressed in picturesque words the advantage of the new time-plan: "I like to think of The World Calendar as a bridge of Friendship over which peoples cross to converse with one another in the same orderly and reliable time-language."



DR. MARY E. WOOLLEY

Chairman of the Peoples Mandate Committee for
Inter-American Peace and Cooperation, and President
Emeritus of Mount Holyoke College

PEOPLES MANDATE COMMITTEE COMMENDS WORLD CALENDAR

IN spite of the fact that it is not the policy of the Peoples Mandate Committee for Inter-American Peace and Cooperation to endorse various movements, favorable action was taken toward commending The World Calendar of 12 months and equal quarters.

This action followed a meeting of the Executive Council of the Committee held in New York, May 20. A letter informing The World Calendar Association of this action signed by Miss Mabel Vernon, Director, included this paragraph:

"Enclosed is a copy of the resolution, which I hope may be of some service. It does not go as far as the resolution you suggested, but in view of our custom of not endorsing various movements it seems the most we can do. Favorable action was taken after Miss Katharine Devereux Blake, who moved the resolution, made an excellent report on The World Calendar."

Dr. Mary E. Woolley, who is Chairman of the Peoples Mandate Committee, was for 37 years President of Mount Holyoke College and on her retirement was made President Emeritus. Since that time she has continued her work as Chairman of this Committee. Dr. Woolley is also Chairman of the Committee on International Relations of the American Association of University Women, and Chairman of the Cooperating Commission of Women in the Federal Council of Churches. She is a pioneer in America for the higher education of women.

RESOLUTION COMMENDING WORLD CALENDAR

The following resolution was adopted by the Peoples Mandate Committee for Inter-American Peace and Cooperation at the meeting of the Executive Council held at the Cosmopolitan Club, New York City, on May 20, 1943, Dr. Mary E. Woolley, Chairman, presiding:

BE IT RESOLVED THAT the Peoples Mandate Committee for Inter-American Peace and Cooperation commend the World Calendar of twelve months and equal quarters which has been endorsed by six of the American republics—Brazil, Chile, Mexico, Panama, Peru and Uruguay. In the opinion of the Peoples Mandate Committee this plan for a calendar of twelve months and equal quarters presented by the World Calendar Association is the most practical and desirable of the various plans for calendar reform that have been proposed.

MARGARET HAMILTON
Secretary of Meeting

THE FIFTH FREEDOM

By Thomas Wayling, House of Commons Press Gallery, Ottawa, Canada

IN the new post-war world pattern the Four Freedoms have already been enunciated and accepted by the United Nations. Freedom from Want and Freedom from Fear were named in the Atlantic Charter, Freedom of Religion dates back to Clause 1 of Magna Carta, and Freedom of Speech has always been a basic principle of Democracy.

There is another Freedom which might well be added; Freedom from Confusion. One of the perennial Hags of Confusion is the Gregorian calendar, and the elimination of this Hag will help all the other Freedoms.

There is Confusion even in the national phases of a new calendar. In Canada there is widespread doubt as to where the question of calendar reform now stands. It is in a position of status quo and it behooves forward-looking Canadians to get on with the plans for post-war calendar reform.

Canada as a member of the League of Nations supported the principle of calendar reform. Resolutions were adopted at

1. The Assembly of the League of Nations at Geneva, 1926, 1928, and The Council, 1931, 1937;
2. The International Labor Conference held in Geneva in 1928 and 1936;
3. The Labor Conference of American States held in Santiago, Chile, in January, 1936;
4. The Fourth General Conference on Communications and Transit held at Geneva in October, 1931.

The question first came officially before the League of Nations in 1923. The Advisory and Technical Committee for Communications and Transit, at its fifth session held at Geneva in that year, decided to set up a Special Committee of Enquiry to investigate the reform which may be introduced into the Gregorian calendar.

In 1924, in answer to an invitation from the Secretary General of the League of Nations to be represented on this Committee, the following reply was sent (April 16) on behalf of the Canadian Government:

"The Canadian Government is content for the present to leave the matter in the hands of the Committee, without making any specific recommendations on its own behalf beyond the simple statement that they regard with favor the idea of making such arrangements as may turn out to be

practicable relative to the fixation of the date of Easter to some particular week, and to the correlation of the days of the week and the month."

In 1924, an Advisory Technical Board was set up by the Department of the Interior, under the chairmanship of J. D. Craig, Director General of Surveys, to discuss the matter. The Board met December 22, 1924, October 12 and December 10, 1925, and adopted a report which was brought to the attention of the Department of External Affairs. This report, however, was not made public.

In August, 1931, under the instructions of the Prime Minister, a second interdepartmental committee was formed to report to the Government on the question of the attitude to be adopted by the Canadian delegation at the Fourth General Conference on Communications and Transit of the League of Nations. The Committee included Dr. O. D. Skelton, External Affairs; R. M. Stewart, Dominion Observatory; Gerald Brown, Department of Labor; S. A. Cudmore, Dominion Bureau of Statistics; R. B. Veits, Department of Finance; A. Webster, Post Office Department; S. J. Cook, National Research Council; G. A. Lindsay, Department of Railways and Canals. The report of this Committee was not made public.

At the Fourth General Conference on Communications and Transit an Act was adopted concerning the fixing of Easter and movable feasts dependent thereon, 26 States, including Canada, voting in its favor, two against, with two abstentions. With regard to the simplification of the Gregorian calendar it was decided that a statement would be forwarded to the Governments invited to the Conference.

While it was claimed that the perpetual 13-month calendar was theoretically more perfect (four full-week months of 28 days), it was also urged that the perpetual calendar of 12 months (four quarters, each comprising months of 31, 30 and 30 days respectively, December 31 being an extra day) possessed the advantage of entailing a less radical break with acquired customs.

The main objection voiced against the 13-month year was that it cannot be divided into quarterly and half-yearly periods as in the case of the 12-month year. The Canadian delegation, along with others, stated that the 13-month scheme gave months which were absolutely comparable with each other, and which contained the same number of days and the same number of whole weeks, so that each date fell on the same day of the week not only every year but even every month. In making this statement the Canadian delegation did not commit its Government in any way as it was thought that the definitive action on any scheme of calendar reform should be contingent on public opinion in Canada and on the general support of other countries.

In this connection it may be recalled that the League of Nations' movement for calendar reform was that created by Moses B. Cotsworth who

migrated from England to Canada, and settled in British Columbia. Mr. Cotsworth's activities induced the following organizations, by the time the 1931 Transit Conference met, to pass resolutions requesting the Government to support calendar reform. Nearly all of them expressed their preference for the 13-month year:

- The Royal Society of Canada
- The Canadian Manufacturers Association
- The Canadian Chamber of Commerce
- The Trades and Labor Congress
- The National Council of Women
- The Montreal Board of Trade
- The Railway Association of Canada
- Some Veterans Clubs

The Labor Conference of American States in 1936, however, recommended the adoption of the perpetual calendar of 12 months and equal quarters.

In accord with that recommendation, endorsed by the International Labor Conference at its 20th session at Geneva, the Secretary General of the League of Nations communicated a draft convention, (submitted by Chile) to the States Members and non-Members by circular letter, dated May 12, 1937, requesting them to let him have their observations thereon before August 31, 1937, if possible. The Canadian Government submitted no observations on the draft convention.

At the 98th session of the Council of the League (September, 1937) a sub-committee of the Council reported that while recognizing the advantages that would result from the simplification of the Gregorian calendar and the fixing of movable feasts and after referring to the number of projects that had been put forward, it was concluded that the diversity of opinion was so great that it would not be opportune to call a conference to deal with the matter.

The Council concurred in the view of its Advisory Committee and instructed the Secretary General to remove the item from the agenda (League of Nations Documents C369, 1937 VIII) and so the matter stands.

The Canadian delegate to the 1931 Conference on Communications and Transit at Geneva was Dr. W. A. Riddell, with P. E. Renaud as substitute delegate and Moses B. Cotsworth as technical adviser. Mr. Cotsworth had been advocating the 13-month calendar and when he spoke he did so in advocacy of that system. It was later made clear, however, that Mr. Cotsworth was not speaking officially for Canada but as a technical expert. The only two countries voting for the 13-month plan were Canada and Yugoslavia. Canada, however, was officially only committed to the proposition that there should be a reform of the calendar, and not specifically a 13-month plan.

Dr. Riddell is now Canada's High Commissioner to New Zealand and is at present "down under," but Mr. P. E. Renaud, in Canada's Ministry of the Secretary of State for External Affairs, is very definite that Canada made no commitment to the 13-month plan; however, even the 13-month was so much an advance on the Gregorian calendar that it was considered as a basis for studying the reform question. Mr. Cotsworth, being the only protagonist in Canada, was consulted and taken along as technical adviser. Naturally he advocated his own 13-month plan.

Canada's position at the present time is that the calendar should be reformed. The only active organization is the Canadian Rational Calendar Association which works in close cooperation with The World Calendar Association of New York, of which Lt.-Col. J. Murray Muir, 82 Jane Street, Toronto, is the Secretary. Colonel Muir, being a veteran of World War I, volunteered at the outbreak of the present war and is now somewhere on active service. Mrs. Muir (a Canadian authoress in her own right) is carrying on the good work.

EMERSON BREWER MADE DIRECTOR

The World Calendar Association welcomes its new Director and Editor, Emerson Brewer, who succeeds Lieutenant Charles C. Sutter, now serving in the United States Army Air Force.

Mr. Brewer joined the Association in January of this year. His experience has well equipped him for this dual position as Director of the Association and Editor of the *Journal of Calendar Reform*. He was a member of the Aviation Section of the Signal Corps during World War I and since has been successively newspaper reporter, editor, advertising writer and merchandiser.

After leaving the newspaper business he was Assistant to the President of the Lamson Company, Syracuse, N. Y.; Sales Promotion Manager, Remington Rand; Advertising Director, Schenley Distillers, Inc.; Account Executive with the Gardner Advertising Company, and handled publicity for the Willys-Overland Manufacturing Company in Toledo.

Prior to joining this Association, he was in charge of trade relations and radio publicity for the Office of Price Administration in the State of Connecticut.

It is our belief that Mr. Brewer will ably assist the Association in bringing The World Calendar to its successful acceptance in 1945. The Association is confident that he has the good wishes of its many members, friends, advocates and calendar committees throughout the world.

ELISABETH ACHELIS
President

DEATH TAKES TWO 13-MONTH PIONEERS

By Emerson Brewer, Director, The World Calendar Association

BY a strange coincidence two men, both leaders in the effort to bring about the adoption of the 13-month calendar, died within a day of each other. One death, that of Moses B. Cotsworth, occurred in the evening of June 4, in Vancouver, B. C., Canada, and the other, that of Charles F. Marvin, on June 5, in Washington, D. C.

Moses B. Cotsworth, internationally known for his efforts to reform the calendar, died at the age of 83 years; Charles F. Marvin, Chief of the United States Weather Bureau for 21 years prior to his retirement in 1934, died in Washington at the age of 84.

Mr. Cotsworth, an English-born accountant and statistician, turned a hobby into a life's work. One of the early converts to the calendar plan advocated by Mr. Cotsworth was George Eastman, president and founder of the Eastman Kodak Company, who not only devoted a portion of his wealth to its advancement but also lent his social and business influence to this 13-month plan. It ran into opposition from groups who argued that the extra month "Sol" would bring increasing difficulties and disrupt the observance of our patriotic days. For example, it changed July 4 to Sol 17.

Not being divisible into the convenient quarter-years of three months and half-years of six months, the 13-month calendar in the long run failed to appeal to business men, educators, farmers and others. With the death of George Eastman, the 13-month calendar lost ground rapidly, and in 1937 was tacitly rejected by the League of Nations when it submitted the Chilean draft of The World Calendar to its Member and non-Member States.

It has been said that Dr. Marvin was chiefly responsible for the rapid and successful growth of the United States Weather Bureau, and, as Chief of this Bureau, he was eager for any type of calendar that would simplify the keeping of these records, a system that he installed. He saw in the 13-month plan a means of better establishing periods of comparison, comparisons vitally necessary if definite histories of weather conditions, rainfall and humidity were to be kept with ease.

With the decline in popularity of the 13-month plan and with his retirement, Dr. Marvin became less and less active in its support.

THE MOON THE CALENDAR AND FARMING

By Professor E. R. Gross, Department of Agricultural Engineering, Rutgers University, New Brunswick, N. J.

FOR ages, probably from his very beginning, man has worshipped the sun and revered the moon. The regular movement of the earth around the sun, causing day and night, became a factor in man's primitive thinking and so a thing of mystery to be feared and worshipped. The moon, appearing in the heavens for a short time, changing its face and then disappearing, causing intervals of moonlight and darkness, was even more mysterious. The sun was the first marker of time, making the day; the moon marked another period, nearly 30 days, hence the "moonth" or our month. As the moon supplied light to relieve the darkness of the night, some thought it was of greater significance than the sun. After all, the moon shone at night when light was needed.

It was not unlikely that primitive man found it convenient to work at night in busy seasons of harvest, in stalking game for food or in waging war against hostile tribes and wild beasts. So it is possible that man planted crops by moonlight and that this gave rise to the moon's attributes with relation to crop growth, yields and germination of seed as well as the health and growth of animals and man himself.

Exactly how it all came about we may never know, but the fact remains that even to this day many believe that the moon does affect the weather, that its movements determine the best time to plant crops, to harvest them, to breed livestock, to castrate the young male animals, to irrigate crops, to erect buildings, to set fence posts, to cure meat, dry fruit, preserve vegetables and even when to propagate human life. The moon thus came to be a great controlling factor in nature. While not recognized by scientists, these powers of the moon in some instances receive popular support based on scientific findings, such as: the moon's effect on the tides, the possible effects of planetary radiation and the polarized quality of moonlight. A sure way to arouse ridicule in almost any group is to aver that these peasant notions, as they are sometimes called, are true. It is not the purpose of this writing to support one side or the other, merely to draw attention to some of them.

It is reported that A. H. Gregory of Miles City, Montana,¹ in his greenhouse secures better yields, improves quality and shortens time of maturity by planting in the right phases of the moon. The fruitful signs of the zodiac are Cancer, Scorpio, Pisces, Taurus and Libra, in the order given. He differentiates between crops grown above ground and crops grown under ground, and lists dates throughout the season when it is best to plant.

A direct correlation has been drawn by Dr. H. J. Franklin² between the extreme northward inclination of the moon and the scarcity of eelgrass in the North Atlantic ocean. Quoted in the same article is the oceanographer Patterson who has developed the theory of a regular periodicity in the ocean currents. Also H. W. Harvey, who observes that the gulf stream is at its highest when the moon is at its least inclination. Temperature changes, food supplies and the introduction of toxic substances due to ocean currents might easily affect marine life.

The experiments of L. Kolisko,³ a German woman, seem to show that planting two days before the full moon gives better germination, heavier crops, better flavor and texture. The chief explanation is that the moon's influence is at its maximum. One writer says: "Through many years of practical gardening we find atmospheric and soil conditions are the decisive factors in successful planting rather than time of the moon." Another writer found planting tomatoes between the third quarter and the full of the moon produced more healthy and vigorous plants and larger fruits. Still another says that planting by the moon for 30 years shows that pole beans, corn and potatoes do much better if planted when the moon is new.

Many of the old beliefs appear in different forms; some common versions are:

Crops producing yields above ground should be planted during the increase of the moon while in a fruitful sign, Cancer, Scorpio or Pisces, especially during the second quarter.

Underground crops should be planted in the third quarter which is after full moon or at its waning, but if leafy crops are wanted, as tops of beets or turnips, then in the second quarter.

Planting in the new moon tends to increase woodiness, while the full moon produces plants that are almost free from this point.

Plant potatoes at the new moon so they will grow rapidly as the moon waxes stronger.

Seed exposed to the polarized light of the moon before planting will germinate better than that exposed to the sun, but planting time does not matter.

Destroy noxious growths in the fourth quarter (while the moon is waning) and in a barren sign, Leo, Gemini or Virgo. This also applies to destroying pests, vermin and rodents.

Cultivate in the barren signs.

Root crops will keep better if harvested when the moon is growing old (in the fourth quarter).

Sauerkraut should be made after full moon when it is in a fruitful sign.

Kill the hogs at new moon so the fat will not shrivel when the pork is fried.

Avoid baldness by cutting the hair at the right time of the moon.

The full moon may be powerful enough to induce early decay.

Dig post holes at the right time of the moon (the source did not state what time that is), so the frost will not heave the posts out of the ground.

The American Indian cut trees for his canoes only in the dark of the moon since the wood was then less subject to worms and rot.

Irrigate and dig wells when the moon is in the watery signs.

When the moon is lying on its back, it is a dry moon because it is holding the water, not spilling it, result dry weather. But others say, it is soon going to pour out the water and bring wet weather.

If at full moon the soil is dry, the forces of the full moon cannot develop their effect on the plant because the conducting medium is lacking.

The most satisfactory results are when the full moon forces can be exerted on a moist soil.

It is obvious that not all these sayings are given in full detail, some interpretations are contradictory and they are not always made entirely clear. The moon change is a continuous process and the moon is full only for a very short time, before it is again increasing, after decreasing. Examples of the more exact statements also found are: "The new moon, May 24 (1927) rises with Cancer on the 26th, 27th, 28th, best days to plant cotton and beans." "August 19 (1927), last day of old moon, and the moon in Leo, sure death to thistles cut at the root."

Entirely erroneous statements were also common as: "I knew we were going to have a storm for last night the moon rose way around to the north-east and the night before way around to the southeast." This just could not happen on two successive nights.

What has this to do with the calendar? Quite apparently the moon had much to do with the *beginnings* of our calendar. The calendar represents the regular rotation of the seasons and is our way of counting time by the year. Agriculture, more than anything else, is a seasonal business, crops can and in many instances are being planted on the same date each year, barring the interference of weather.

Whereas there exists an orderly plan in the appearances of the different phases of the moon, and there is a similar orderly plan in the regular occurrences of the seasons within every year, the calendar, which represents our year, lacks orderly planning. The irregularities of our calendar with its unequal quarters, its unbalanced half-years, wandering dates and the frequency with which extra or fifth Sundays occur, are a constant annoyance to the average farmer.

Agriculture today is "big business." Farmers must plan their work

with care and with thought far in advance. Every day must be made to count.

Whether it is the planting of a crop, its cultivation or its harvesting; whether it is the purchase, the feeding or the sale of livestock; and even though the day's routine may be as methodical and constant as that of the average dairy farmer, the days, dates and periods of the year must be readily comparable with like periods of previous years.

With one month having five Sundays and four Saturdays last year (and with the situation reversed this year), and with days and dates constantly changing, comparison is difficult if not impossible. Planning takes extra time and time on the farm today is more than money.

With the invariable World Calendar of 12 months and equal quarters, always the same, the farmer, whether his crop is milk, livestock or grain, will find his task easier and his profits greater under this well-ordered plan of time-keeping.

References

¹ *The American Florist*, Vol. 5, p. 20, May, 1934.

² N. E. Stevens, *Science*, Vol. 84, p. 87, July 24, 1936.

³ *The Gardeners' Chronicle*, London, Vol. 100, p. 383, November 28, 1936. *The Flower Grower*, Vol. 14, p. 560, December, 1927. *The Farmers' Advocate*, Vol. 62, p. 1577, November 3, 1927, and Vol. 65, p. 41, January 9, 1930. Peter Blaine, *House and Garden*, Vol. 69, p. 113, May, 1936. *Horticulture*, Vol. 16, p. 155, April, 1938.

WHAT WE DO TODAY IS VITAL

By ELISABETH ACHELIS

The homely virtue of repetition is to emphasize the good. We wish to state again and again that the planned and perpetual World Calendar has a real contribution to make for more effective efforts and for the conserving of time, money and material. Its ordered arrangement of days and dates, weeks and months, quarter- and half-year divisions achieves perfect coordination and cooperation, more needed today than ever before to win the victory and to bring success to our many undertakings.

The World Calendar is *not* an isolated cause separated from our many activities, whether these be for the winning of the war, for postwar planning, or for the coming of the peace. It is a link and real part of all our efforts. For is not Time the most precious commodity we have, and is not everything we think, plan, do and say predicated on Time, by means of the calendar? The best is only good enough. The World Calendar is the best. Let us not fail in this needful task that is ours to do today—to approve and to adopt The World Calendar.

CALENDARS AND CALENDAR REFORM

By Dr. W. E. Castle, Emeritus Professor of Genetics, Harvard University; Research Associate in Genetics, University of California; member of the National Academy of Sciences

Abridged from The Scientific Monthly, February, 1943

SOMETIME we shall be called upon to reshape the organization of the world so as to insure a lasting peace and promote the general welfare of mankind. It is well that we begin to think about that reorganization and to consider what changes, if any, would contribute to the welfare and happiness of mankind in general, for isolation is no longer possible for any part of the globe or any section of the human race. Our destinies have been for all time united by science and invention, which have diminished the distances between continents. One of the devices which make possible an orderly existence of men in social groups is the calendar.

The calendar by which we measure the passage of time and the recurrence of the seasons possesses several serious defects capable of remedy, if all men could reach an agreement as to what changes are desirable, and the proper time for making them. This, however, is not easy of attainment, for our present calendar is one of the basic structures of our civilization and such structures are not easily changed. They constitute the framework of all our social institutions, which has reached its present state by a long process of evolution, and such a framework, age old in its development, should be altered as little as is consistent with progress.

All peoples who have engaged in agriculture or even the most primitive sort have felt the need of a system for measuring time and predicting the recurrence of the proper seasons for planting and harvesting crops. Around an agricultural calendar they have arranged a program for religious rites, feasts, dances and other celebrations designed to influence and propitiate the unseen powers thought to control natural processes.

The most obvious means for measuring time are the movements of the heavenly bodies, sun, moon and stars. A calendar based on one or more of these has regularly been formulated by a primitive people emerging from barbarism.

The most conspicuous of the heavenly bodies, the sun, not only defines the year from one seeding time to the next, but also from one sunrise to the next defines the length of the day. Since day and night are in the long run of approximately equal length, it was natural that each should be divided further into hours, the number of which was set at 12 of daylight

and 12 of darkness at or near the equator, where day and night are approximately equal, and where the problem first presented itself to the human mind. The subdivision of each hour into 60 parts, minutes, and each minute into 60 seconds is a device handed down to us from ancient Babylonia.

Next in importance to the sun as a measure of time is the moon. Its recurrent cycles give us the months, each cycle covering about $29\frac{1}{2}$ days. Twelve such cycles aggregate 354 days or some 11 days short of a solar year.

Since the solar year does not correspond exactly with any definite number of lunar cycles, it is impossible to combine lunar months into a solar year with exactness. The nearest approximation is obviously a 12-month year, although it includes only 354 days. Different peoples in their calendars have used months of arbitrary length ranging in duration from 20 to 31 days.

The Maya of Central America used a 20-day month, although they were aware that this did not correspond with a true lunar cycle. Their solar year contained 18 such 20-day months, aggregating 360 days, a closer approach to the true number of days in a solar year than is given by 12 true lunar months. The Maya added five extra days to their 18-month year to make a solar year of 365 days. These extra five days, however, were not deducted from the ensuing month, so that the succession of months went on independently of the seasons and no attempt was made to have them come out in harmony. Spring began in whatever month happened to be current, its arrival being determined by the alignment of the sun with certain carefully placed stones.

Our present calendar came down to us from the Romans who in turn had it from the Egyptians. As revised by Julius Caesar at the beginning of the Christian era, the Julian calendar consisted of 12 months of varying length. The mean length of the solar year was recognized on astronomical evidence as being $365\frac{1}{4}$ days. Ordinary years were accordingly made to contain 365 days and an extra day was added in the shortest month, February, every fourth year.

This so-called Julian calendar persisted unchanged for more than 1500 years, and except for a single modification still persists with us.

In estimating the length of the solar year as $365\frac{1}{4}$ days, Julius had made it too long by 11 minutes and 14 seconds, as more exact astronomical observations have shown, and in 128 years the error would amount to an entire day. The erroneous days continued to pile up century after century until in 1582 the matter was taken in hand by Pope Gregory XIII. Gregory directed that leap year should be omitted in all centenary years except those which are multiples of 400. Thus the year 1900, though divisible by 4 was not a leap year, but 2000 will be because it is a multiple of 400. Such is the present status of our calendar.

According to modern astronomy, however, a slight over-correction by leap years still persists in the Gregorian calendar. To eliminate this it has been proposed to make the year 4000 and all its multiples common (not leap) years. With this modification the beginning of the year will not vary from its present place in 200 centuries (20,000 years), which is good enough! The leap-year rule, as thus qualified, would run as follows: Every year the number of which is divisible by 4 is a leap year, excepting the last year of each century which is a leap year only when the number of the century is divisible by 4; but 4000 and its multiples 8000, 12000, 16000, etc., are by a further exception common years.

Pope Gregory's reform of the calendar in 1582 was promptly accepted by all Roman Catholic countries, but in the sixteenth century religious prejudices were very strong. Protestant England refused to take orders from Rome either on the calendar or on any other subject and thus a desirable reform was delayed in all English-speaking countries for two centuries. The Eastern or Greek Catholic Church was even more obdurate and still adheres to the Julian calendar. The Julian calendar was in use in the North American colonies, as in all other parts of the British Empire, until shortly before the American Revolution. Thus George Washington was born on February 11, 1731, of the Julian calendar and he himself always regarded February 11 as his birthday. But the error in the Julian calendar amounted to 11 days when Great Britain switched to the Gregorian calendar and so Washington's birthday became February 22 of the current calendar.

A complication in the measurement of time and in calendar making, which we have not yet considered, is introduced by the seven-day week. This arises not from astronomical but from social and religious considerations. Occasional days of rest and recreation are essential in a well-ordered society. In various parts of Africa, weeks of four, five, six and eight days are observed by the natives, usually in connection with a recurrent market day. The seven-day week originated in western Asia and spread to Europe and North Africa with the spread of the Jewish, the Christian and the Mohammedan religions, which agree in having a seven-day week though with a different holy or rest-day in each.

Neither the 365-day year nor the month of 29 or 30 days is exactly divisible into seven-day weeks, so that in our present calendar each successive New Year's Day falls on a different day of the week. Every other event which falls on a particular day of the month falls on a different week-day in each successive year. This is only one defect but a serious one of our present calendar, and it is capable of eradication in a very simple way, as we shall see.

A second defect of our calendar arises from the varying numbers of days in the month. In the shortest month, February, it is 28 or in leap

years 29. In certain other months the number is 30 and in the rest 31. One has to go through the lines "30 days hath September," etc., before he can feel sure how many days there are in the current month. Even then he cannot tell without a calendar of the year before him how many Sundays, how many full weeks and how many weekdays there are in the month, since these change from year to year. All these items are of importance to the business man, the schools, the churches, the banks, and all of us. There should be no uncertainty concerning them and there need be none under a slight modification of the calendar, which would make every day in every year the same as regards the day of the week and the day of the month. To bring about this desirable uniformity, two different but related plans have been proposed. They are known as the 13-month calendar (a proposal now withdrawn) and The World Calendar. The 13-month calendar would make every month of exactly the same length (four seven-day weeks) so that it would begin on a Sunday and end on a Saturday. The number of work-days in each month would then be the same, except for the occurrence of special holidays. The standard year would thus consist of 52 seven-day weeks, would always begin on Sunday and would end on an extra Saturday as a 365th day. Another extra day would be added in leap years. But with these desirable features is included one serious disadvantage. The year is not divisible into equal half-years or quarters, since 13 is an odd number of months.

This difficulty is avoided and most of the advantages of the 13-month arrangement are retained in the proposed World Calendar. This retains the familiar 12-month year, and divides it into four quarters of equal length. Each quarter begins on Sunday and ends on Saturday. It contains three months including 91 days, in its 13 weeks. Month-dates always fall on the same weekday from year to year. Each month has 26 weekdays plus Sundays, a uniformity very advantageous to business.

The first month of each quarter begins on Sunday and so contains five Sundays. The other two months of the quarter contain four Sundays each. Each quarter thus includes 13 Sundays.

The first month of each quarter consists of 31 days (including the extra Sunday). Each of the other two months of the quarter consists of 30 days. The three months of each quarter are thus alike in length except for the extra Sunday of the initial month.

Each quarter includes 91 days, and combined the four include 364 days. An extra Saturday, a holiday called Year-End Day, follows December 30 and this makes the 365th day of the standard year, as in the 13-month calendar.

In leap years an extra Saturday, Leap-Year Day, a holiday, follows June 30 in the middle of the year, making a 366th day.

A World Calendar thus revised would be "balanced in structure, per-

petual in form and harmonious in arrangement." Each year's calendar will be the same, except for the extra Saturday in the middle of each leap year. Educators, scientists, and professional men would welcome the adoption of The World Calendar which would greatly simplify the arrangement of schedules and appointments.

Holidays such as Easter, actually an ecclesiastical affair, could be stabilized and given a fixed place in the calendar, preferably at the week-end so as to make two-day or three-day periods of recreation possible without breaking into the working week. Easter, of course, comes on Sunday, Christmas would come regularly on Monday, Washington's birthday could be moved to the day which he celebrated, the 11th of February, Lincoln's birthday would come on the following day, Sunday, February 12, or if celebrated on Monday, the 13th, a single national three-day week-end holiday in mid-February would result. Labor Day naturally falls on Monday, September 4, national election day could be fixed on Monday, November 6. Armistice Day might well be celebrated, as in England, simply by a two-minute pause on Saturday, November 11, and Thanksgiving Day could be stabilized on Thursday, the 16th of November, or preferably advanced to the 18th, Saturday, or the 20th, Monday.*

The 17th of March, St. Patrick's Day to Irish Americans, and Evacuation Day to all Bostonians, since Washington forced the British soldiers out of Boston on that date, would fall on Sunday and its celebration probably on Monday. Only the 4th of July (Wednesday) and Columbus Day (Thursday) would remain as mid-week holidays widely celebrated in the United States.

By way of summary, we may note that the chief source of the imperfections of our present calendar lies in the attempt to use simultaneously three different methods of measuring time: (1) the solar year of 365 days, (2) the lunar month of 30 days more or less, and (3) the conventional seven-day week. No two of these come out in agreement.

We cannot get away from a solar year of slightly more than 365 days, since on this the recurrence of the seasons depends. Our problem then is to bring into conformity as nearly as possible with the solar year both the months and the weeks. Our present calendar does neither of these things adequately. To make up a year of 12 months we have to adopt months differing in length by as much as three days, which is poor time engineering. To make up a year of 365 days we have 52 seven-day weeks, with one day left over. By beginning the next week on this left-over day, each successive year begins on a different weekday. We are confronted with the same difficulty as regards the day of the week, as confronted the Maya regarding the months in relation to the year. Instead of skipping the five

*EDITOR'S NOTE: Congress passed an Act, December, 1941, establishing Thanksgiving on the fourth Thursday in every November; in The World Calendar, November 23.

extra days at the end of a year, and beginning a new year with a new month, they made the five extra days part of a new month and thus there was no correlation between a particular month and a particular part of the year. And we, instead of skipping the left-over day at the end of the year and beginning the new year with a new week, keep the succession of seven-day weeks uninterrupted regardless of what it does to our yearly calendar.

The difficulty concerning the lack of agreement between days of the month and days of the week in successive years is met in both the proposed 13-month calendar and the proposed World Calendar in the same sensible way. The extra day at the end of the year is not put into a seven-day week, but is made a special holiday, a year day or extra Saturday, as you choose to call it. The extra day of leap years is treated in a similar way, as leap-year day which does not make part of a seven-day week.

The variation in length of the months in our present calendar is obviated in a different way in the 13-month calendar and The World Calendar. In the former each month would consist of exactly four weeks, 28 days, the total being 364 days, with year day not a weekday, making the 365th. The impossibility of having quarter-years made up of like numbers of months is the chief defect of this proposed calendar.

In The World Calendar, there would be four equal quarter-years of 91 days each [13 weeks or 3 months], with one extra year day making the 365th.

Every month would contain the same number of weekdays (26) and the same number of Sundays (4) except the first month of each quarter which would contain a fifth Sunday, the odd or 91st day of the quarter.

How and when could we change from the present to the proposed World Calendar with the least amount of disturbance to existing conditions? January 1, 1945, would be a practicable time.

Of course, no country singlehanded could bring about the change. It will have to be by joint action of a large part of the civilized world. Already 14 nations have officially approved The World Calendar. In response to a proposal made by Chile and sent to all governments by the Council of the League of Nations in 1937, favorable replies were made by six American governments, *viz.*, Brazil, Chile, Peru, Uruguay, Mexico, and Panama; as well as by Esthonia, Greece, Hungary, Norway, Spain, Turkey, Afghanistan and China. If the United States and Canada were to join with Mexico and the South American Republics in adopting The World Calendar, it seems highly probable that the rest of the world would soon accept it. There is no religious opposition in sight today as there was when Pope Gregory instituted his reforms, nor is there ground for political opposition. Nothing but the inertia of custom holds back a reform which would benefit all classes of people, not least of all students and teachers.

WANTED—A CALENDAR AS STABLE AS A CLOCK

By Henry M. Hyde

Henry M. Hyde, a member of the Astronomical Society of the Pacific, speaking over Radio Station KLX, owned and operated by the Oakland (Cal.) Tribune, has won a large radio audience because of his faculty for humanizing and popularizing serious scientific information in an informal, interesting manner. During his years on the air, he has given a number of programs devoted exclusively to the calendar, its early development and clarification. It should be needless to say that Mr. Hyde as a scientist is an ardent supporter of The World Calendar of 12 months and equal quarters.

SUPPOSE that tomorrow, through some freakish calamity, all the clocks and watches in the world, all the calendars and the various astronomical instruments used for computing TIME, together with every record of stellar movements, patiently compiled throughout the centuries, were destroyed. What utter confusion of human affairs would result almost immediately! It is certain that all astronomers would at once become the busiest of men and, very likely, the most popular. The apparent motion of the sun across the dial of the heavens would be our timepiece by day, and the moon, especially when at or near the "full" phase, would serve to mark the periodical "watches of night."

Undoubtedly, we of a clockless world would be glad enough to watch the rising of the sun and, in some measure, would come to understand why our age-distant ancestors dreaded the coming of night. It is small wonder that solar worship was one of the earliest, as in its beginnings it was also one of the purest, forms of religious worship concerning which we have knowledge. Naturally earth's companion globe, the moon, received its meed of adoration.

The ancient astronomers left considerable information relative to their methods of keeping track of the passing hours—information which explained their sun-dials, water-clocks and sand-clocks, plus other cumbersome devices. For centuries the records of celestial phenomena, such as eclipses of the sun and the moon, were set down as having occurred "toward the middle of the third hour of the day," or "an hour after sunset," or any other period to suit the occasion.

The Arabs finally hit on the method of estimating the duration of a lunar eclipse by measuring the altitude of some near-by star both at the

beginning and the ending of the event. The resultant difference in degrees of arc was then readily changed into time-measurement.

The present method of ascertaining the correct time is by observing the transit of a certain star across a selected meridian. It is evident that the astronomer especially is alive to the need of simplifying the various divisions of time. The present awkward calendar can be materially and easily simplified by some minor adjustments and such a movement is under way. It is backed by scientists of practically every nation, men like the Astronomer Royal of England, Dr. H. Spencer-Jones, for instance. It is only a question of time before the plan has been legally adopted all over the world. Appropriately, the calendar has been named "The World Calendar." It may take considerable time for this calendar to be made effective, for changes of any sort move slowly.

However, this proposed calendar is so simple it may be adopted much earlier than now seems possible. The more its advantages and its simplicity are discussed, the quicker will it be adopted.

Clocks and watches and the calendar are based upon the same fundamental observation of celestial phenomena used by primitive man. Our timepieces, the clocks, mark off the same periods of darkness and daylight, but for greater convenience we have divided those periods into 24 equal hours. Our calendar based on the same recurring cycles of seasons also represents certain convenient divisions. We have the month allotted a dozen to the year. We have the week of seven days and the quarter-year divided into periods of three months each. However, one of the time-determining instruments, unfortunately, is not as perfect as the other.

Clocks are practically perfect, but the present calendar certainly is not. Instead of being perpetual—every year the same—it comes in 14 different varieties according to the day of the week it happens to start with and whether it is leap year or not. So, at the end of the year, we throw all calendars away and hang up others in their stead—an expensive and useless procedure, to say the least.

The present calendar has other failings, too. According to it the first half of the year has 181 days, and the succeeding period 184 days. Were the present calendar a clock, we could say that high noon comes anywhere between three minutes before and three minutes after the hour of 12. In addition, the days of the week come on different dates in the month each year.

The reasons are that one of the instruments for measuring Time, the clock, has been perfected; while the other, the calendar, remains imperfect. But this condition can be easily remedied by the universal adoption of a calendar with balanced months and equal three-month periods. The latter will have 91 days and each of the three months thereof will have 26 business days, excluding Sunday, of course. The same date will always come on

the same day of the week, year after year; the first day of each quarter period will always be Sunday; the first day of the second month in each quarter will come on Wednesday, and the third month in each quarter will start on Friday. In the first month of each three-month period there will be 31 days; the second and third months will each have 30 days.

The only changes in the present calendar needed for the proposed World Calendar to be put in use are to give the months slightly different patterns, as outlined, plus the provision of a place for just one extra day, say, at the end of the year; and the placing of leap-year day between June and July, thus providing a double holiday every four years. Such periods could be well employed in furthering a cause to bring all nations into closer harmony—really “The Parliament of the World.” If every individual, no matter of what nationality or position in life, would dedicate himself to the job of bringing this about, eventually the heaven would make its presence felt and, in time, war would be no more!

The average person is slow to adopt marked changes of any sort. However, unless we are advancing we soon fall behind and grow stagnant. To move the world a thinker is needed. Somebody in that category is responsible for The World Calendar! “Let’s keep the ball rolling!”

OBITUARY NOTES

Death Takes Dean Hawkes

HERBERT E. HAWKES, long one of Columbia University’s most sympathetic, and to quote President Butler, “one of the outstanding contributors to Columbia’s record of achievement in the Twentieth Century,” died May fourth. A Professor of Mathematics for ten years, he had been dean since 1918. Dean Hawkes sought to educate his young men through and through, mentally and morally. Perhaps his greatest originality was in observing and studying his students and finding out their talents and capacities, what they could and couldn’t do. He as a mathematician had been for many years an advocate of The World Calendar.

Speaking of The World Calendar he said, “I am very much in favor of the form of calendar which the enclosure with your letter indicates. I think that steps ought to be taken to secure world wide approval if it is in any way possible to do so.”



ASTRONOMY'S CONTRIBUTION

By James L. C. Ford, Assistant Professor, Department of Journalism, University of California

“OUR present calendar is cumbersome and the uniform World Calendar would be an advantageous revision. It would result in a stable calendar—one better adapted to the needs of people.”

This is the opinion of Dr. Russell Tracy Crawford, Chairman of the Department of Astronomy of the University of California. Dr. Crawford, who also is Director of the Students Observatory, has been closely connected with Lick Observatory on Mount Hamilton, the University's center for astronomical research, home station for expeditions throughout the world to study eclipses, and the scene for many special studies of double stars, comets, and spectroscopic observation of spiral nebulae.

“Let me see,” Dr. Crawford sat thoughtfully for a minute. “I’ve been interested in the subject of calendar reform and especially The World Calendar for more than 20 years. It was back in 1922 that I was Chairman of the Committee on the Reform of the Calendar of the American section of the International Astronomical Union. I surely have a copy of the favorable report made at the meeting of the Union in that year—”

While Dr. Crawford's secretary hunted the report in her files, the thickset astronomer, his eyes twinkling behind his horn-rimmed glasses, leaned back in his chair, recalling his work a score of years ago. The old-fashioned office furniture, the simple setting of the plain little office, only emphasized the more strongly rows and rows of astronomical journals and heavy scientific tomes piled to the ceiling. Outside, the hum of bees was heavy in the purple wistaria vines which covered the low building.

“Here it is, Dr. Crawford.”

“Ah, yes, thank you. Now let me read from it—”

“Scientific organizations should be conservative in their advocacy of reforms affecting the every-day life of the people. The governing motive should be the greater convenience of the public. The gross inequality in the length of months and lack of system in assigning the different lengths, justify a modification of the Gregorian calendar in removal of these defects. Advantage should be taken of the occasion to reform the calendar in other respects. We recommend that the representative of the American section of the International Astronomical Union endeavor to secure the adoption and introduction of a calendar having the following specifications—”

"But I needn't read any further," Dr. Crawford said, "for those specifications are exactly those embraced in The World Calendar—such as four equal quarters of 91 days each, a Year-End Day between December 30 and January 1, a Leap-Year Day in leap year. In other words, it would be a perpetual calendar."

The mere mention of the 13-month calendar brought instant criticism from Dr. Crawford. He felt that, while the calendar was in need of revision, a change to 13 months would only serve to make it worse—make an already cumbersome calendar more unwieldy.

Dr. Crawford's service as Chairman of the calendar reform committee of the American section of the International Astronomical Union was a tribute to his long and distinguished career. After receiving his first degree from the University of California in 1897, he served as Fellow at Lick Observatory for several years. He then became an assistant astronomer at the University and joined the faculty in 1903. He really got up nearer the stars when he served as Major in the Air Service during World War I. Among the many learned and professional societies which claim him as member are: the American Association for the Advancement of Science of which he is a Fellow, the Astronomical Society of America, the Astronomical Society of the Pacific which he has served as President, Sigma Xi and Phi Beta Kappa.

All through the ages the calendar has been the product of astronomers who have brought about its every revision, contributed the fruits of their life study of the sun, moon, and stars to its development. So it is not surprising that a present-day group of astronomers should be concerned with the improvement of our calendar.

"Adjustment of the calendar to the motions of celestial objects has always been regulated by the astronomer," Dr. Crawford emphasized.

If you are planning on making a trip to Mars over the week-end, don't bother to pack a clock or calendar in your baggage. For our clocks and calendars are adjusted to celestial movements as observed on the earth and would be of no value at all on Mars or any other planet. It takes Mars about 687 days to move about the sun, so its "year" would be that long. Also each of its days would be more than a half-hour longer than one of our days. On Mercury, it would take only 88 of our days for a "year," while on Pluto a "year," or the complete orbit of that planet around the sun, would require the equivalent in time of 247.7 of our years!

"The calendar is such an essential and necessary part of our lives," pointed out Dr. Crawford, "that we may form the erroneous idea that it is something that has always been existent in man's mental equipment and scheme of life. But this is far from the case. It had very crude and simple beginnings and went through many changes to arrive in its present form. Certainly it could still further be improved. And in all its evolu-

tion, astronomers served as guides and leaders in each transition. "Back in 4700-4550 B.C., a time so dim in history that we cannot be definitely sure of the dates, Egyptian priest-astronomers used the pyramids of Gizeh to determine the exact length of the solar year. And another Egyptian astronomer, Amenemhet, in 1550 B.C., constructed the first water clock of which we have a description.

"It was a Babylonian astronomer, Nabu-rimanu, who in the sixth century before Christ had calculated the solar year as 365 days 6 hours 15 minutes and 41 seconds—an error of only 26 minutes and 55 seconds."

The Romans in their turn aided considerably in the development of the calendar, Dr. Crawford explained. In 315 B.C., Flavius put an end to the secrecy in which the calendar had been held by the College of Pontiffs. The Julian calendar really was the result of the work and study of the Alexandrian astronomer Sosigenes, whom the great Caesar had met on his conquests. It was in this calendar, adopted in 45 B.C., that allowance was first made for the fact that the year exceeds an even 365 days by almost a quarter of a day. But this calendar, by adding an extra day each fourth year, figured the difference to be an exact quarter of a day which is not correct, and the Julian year was approximately $11\frac{1}{4}$ minutes too long. The calendar error, as a result of this miscalculation, gradually increased.

"It was this error," Dr. Crawford continued, "which by 1582 was about 10 days, that was remedied in time by Pope Gregory XIII. We call the resulting calendar Gregorian, but again it was actually an astronomer, Clavius, who made the calculations and planned the change. In this calendar, a leap year is omitted every century year that is not divisible by 400."

This is the calendar we have today. And though many inventions and other changes in our manner of life and civilization have been made in the years since its adoption, we still cling to this calendar which, though now quite accurate as to length of the year, is nevertheless inadequate and inefficient for our modern needs.

Astronomers themselves have not been content to continue with this calendar. In 1834, almost a hundred years before the report which Dr. Crawford made to the International Astronomical Union as Chairman of the calendar reform committee of the American section, the Abbé Mastrofini suggested a perpetual calendar with a "stabilizing day" to the Vatican. In 1887, the Astronomical Society of France recommended the perpetual calendar of 12 months and equal quarters (as in *The World Calendar*). This same society rejected the 13-month calendar as impractical.

"*Ad astra per aspera*" (to the stars through difficulties) runs an old Latin motto. It might well be changed to read "*Astra spem dant per aspera*" (the stars inspire hope despite difficulties), thanks to the astronomers whose efforts have given us our present calendar and whose continued interest encourages the hopes of *The World Calendar*.

ALABAMA TEACHER SEES WORLD CALENDAR AS GREAT AID TO SCHOOLS

By W. C. Parsons

*An address delivered before The Alabama Education Association,
Birmingham, January 9, 1943*

IT has long been one of life's bitter ironies that we members of the teaching profession, while being responsible for the minds of people who become the guiding geniuses of America, have rarely been permitted to go along with the finished product.

Ours has been the responsibility, with little of the authority, and but a small portion of the credit.

Few of us have been permitted to become an active fluid part of our community or national life. It is only in the past few years that public opinion has permitted us to use actively the practical knowledge that years of association with people have given.

We possess tremendous power for good. We take the child with the mind unformed and during the formative stages direct him as our training and background tell us he should go. Today, with the student mind well arranged, more cosmopolitan and international than ever, we have a greater duty to our pupils, to our communities and to our nation—a duty that we as teachers cannot disregard.

When the war is won, we have an obligation to this generation and to those generations which follow that goes far beyond the mere task of preparing a child's mind to assimilate knowledge.

The world is changing and we must take a more active part in this change.

A more peaceful yet a tremendously important change is the revision of our present cumbersome hit-or-miss calendar. With isolationism growing weaker and with a growing appreciation of international responsibilities, there must be a civil calendar for the entire world—a World Calendar.

Let us not get the impression that our present calendar is one of great age, because the calendar we have come to know has been in use in English-speaking countries for less than 200 years, and in some other countries for less than 20 years. At best, it is unwieldy, ever changing and unpredictable. The new World Calendar represents an improvement, a modifica-

tion that retains all of the progress achieved by calendar-makers in the past 9000 years, at the same time clearing away the absurdities, the inconveniences and the unbalance of our present unsatisfactory one.

Of special interest to us, the new World Calendar offers a practical solution to the perplexities of the present school year.

But let us first discuss the purposes of the revision and tabulate them: We strive to abolish the wandering habit of the weekday. We want to give to industry, to labor, to government, to law, to agriculture and to retailing a calendar that will be the same year in and year out. We want to make it possible to plan next year as we planned this year.

Now let us see how we can achieve this. The World Calendar plan retains the 12 months in the year but equalizes the half-years. There will be two half-years of 182 days each. Each half-year would be divided into two quarters of 91 days each. In each quarter will lie 13 weeks, or three months, each with 26 weekdays.

Now let us visualize the new civil World Calendar of 12 months and equal quarters. It is a rectangular sheet of paper divided into quarters. Each quarter in turn is divided into three months. The first month of each quarter has 31 days. The following two months consist of 30 days. It is easy to remember—31-30-30 and so on through the year.

But we have accounted for only 364 days. What about the extra day? That will be the 365th day of the year, to be known as a World Holiday, December W, the letter W for World.

But every four years we have another extra day. This is taken care of by adding one day after what would normally be June 30. This, too, is a World Holiday, with the minds of the people directed toward world affairs and international responsibilities. It is called June W.

The advantages of such a World Calendar are obvious. Business men will like it because the year lends itself to practical merchandising, to logical financial planning.

The manufacturer likes it because pay-rolls for part-time workers, for hour-workers and for salaried people can be figured on the same basis; inventories can be calculated and anticipated. Quarter-years become definite retained units of time. Complicated adjustments are unnecessary. Money, time, effort and material are saved.

Labor, experiencing the same difficulties as industry, at a Labor Conference of American States, in Chile, 1936, recognized that the present calendar is unsatisfactory from an economic and social standpoint and officially approved The World Calendar as a definite social gain.

Governments of 14 countries see the facility of equal quarters, unvarying dates with days and the ease of figuring taxation and interest.

The lawyer, long harassed by undetermined phrases such as half-year, quarter-year, has approved this change to The World Calendar.

In the rotation of crops, in the finishing off of stock, in work-planning, the farmer the world over sees freedom from confusion by the adoption of The World Calendar.

But it is the teacher and the educational system that will benefit to a marked degree by this balanced, modern calendar. School terms, semesters, school years will open on definite, prearranged logical dates. The number of hour-periods of study can be definitely figured. Vacations, always an interrupting interval, are a problem no longer. As it stands today, it is almost an impossibility for anyone excepting the Registrar, the Secretary of the Board of Education, or the Superintendent, to know from any year to another the dates for regularly established occasions.

The National Education Association recommends adoption of this calendar. The calendar revision has attracted the interest of leaders of thought all over the world. It involves the minimum of changes; nothing is added and nothing is taken away; it is only a readjustment. The year would be the same as now with the exception that its divisions are made more nearly equal. The World Calendar plan has balance because its essential structure is permanent in arrangement. Now, with the realization of international dependency, with a meeting of the nations when the war is won, is the time for us as leaders in our community to give serious thought to a concerted movement advocating the adoption of this new perpetual World Calendar of 12 months and equal quarters which will bring timely order out of chaos.

VAST SAVINGS TO SCHOOLS SEEN

By EDWIN H. ZEYDEL

Managing Editor, The Modern Language Journal

I beg to present to you the following remarks on the academic world and the calendar. Every year our 700-odd universities and colleges devote faculty meetings to discussing the calendar for the following year. Then they proceed to publish expensive catalogs and bulletins announcing this calendar, which varies from year to year because of the eccentric fluctuations to which our present Gregorian calendar is subject. This represents a national outlay of millions of dollars every year. If the proposed World Calendar were adopted, it would hardly be necessary to incur such expense every year. The academic calendar could be published once, together with the rules for admission, the list of prizes and scholarships offered, the requirements for graduation, and all the rest of the scholastic data which rarely change in the course of a decade. This body of information could then be got out in a much larger edition than is now the case, and be reprinted when the edition is exhausted. The only new matter that might require republication from year to year would be the comparatively brief lists of those courses which are newly given in a certain year. The average college or university would open on the same date every year, not vaguely specified as the third or fourth Wednesday of September, as the case may be, but on September 20 or 27 as a date fixed forever. And all the other academic dates would be just as rigidly established, too, so that soon no one would have the slightest doubt about them or would feel need of speculating on what day of June Commencement will fall two years hence. The proposed World Calendar would indeed be a boon to the academic world.

INCREASED MANPOWER NOT SOLE ANSWER TO INCREASED WAR OUTPUT

By Emerson Brewer, Director, The World Calendar Association

LIBERTY ships slide down the ways in ever-increasing numbers. Lumbering freight trains loaded to the gunwales puff and groan and whistle for the right of way from dozens of teeming industrial centers. Airplane plants that never close pour out an ever-increasing stream of fighter planes and bombers.

Ferry pilots settle into pilot seats to deliver by air these engines of death to a dozen different battle fronts.

America has girded for war. The nation's industrial genius in less than two short years has amazed and discomfited our enemies and delighted our Allies. On prairie farms, where seventeen months ago corn still grew, are mile-long plants, employing thousands of men working at top speed to build weapons for our growing army of seven million men.

America has been at war since December 7, 1941, and casualty lists top sixty thousand men. Billions have been spent and billions will be spent to bring victory to the Allied cause. Yet, in spite of these sacrifices, in spite of the growing taxes and the war bond drives, Hitler's European Fortress has yet to feel the tread of an enemy army.

True, the rim of Japan's fringe of defenses has been split, but so far Japan has won her war. She is consolidating her forces, exploiting her winnings, and building frantically an economic empire.

Hitler, hard pressed on the Russian front, threatened in Italy, harassed by an ever-increasing deluge of giant bombs, sits so far secure within the steel circle of well-fortified Europe. Billions of dollars worth of war equipment and millions of men will have to be expended before he is dislodged. Defeat faces him and his satellites in the months to come, but today he is still in a strong position to defend himself.

The bombing of the Ruhr is disconcerting. The disruptment of his transportation system is embarrassing, but long since the center of Hitler's industrial empire has been moved inland. Factories have been scattered and dispersed, so that total bombing alone will hardly win the war.

Barges, bombers, fast P. T. boats, destroyers, and men in ever-increasing numbers must be massed on a dozen different battle fronts before the

enemy feels the real weight of Allied power. This is the war picture we find today. These are the hazards that confront the Allied nations in terms of actual accomplishment. Insofar as the Allied nations are concerned, the war has just begun. We are off to a good start. Our officers are capable, resourceful, trained, and courageous.

Our Armies and our Naval forces are equipped to a higher degree than any other in the history of the world. Our citizens are graciously accepting the responsibility for expenditures that rise to astronomical heights. And all this calls for an increased willingness to cooperate and to coordinate our various forces—Government, Army, Navy, Air Power and civilians—all working together in an increasing teamwork of sacrificing and sharing for the victory to come. For the Burma Road has yet to be opened, and shipments to China total less than seven thousand tons a month. Generalissimo Chiang Kai-shek's very courageous Army hangs on by its very teeth, harassing, embarrassing, thwarting a well-equipped, well-trained, courageous and fanatical enemy.

General MacArthur recently said that operations in the South Pacific had been turned from a defensive movement to an offensive war.

As this is being written, Port Darwin has again been bombed by a luckless fleet of Japanese bombers. In spite of courageous submarine efforts, shallow boats carry the fruits of war from island to island and finally to the capital of the Japanese Empire. Oil wells in the Netherlands possessions are operating again. Natives are once more tapping rubber trees, the sap from which will go to make tires for Nipponese planes, tanks, and motor cars.

So America, speeded up to hitherto unknown heights, must do even better. Eleven tanks must roll off the production lines where ten rolled before. Seven thousand fighter planes must take to the air where six thousand was thought to be the topmost figure. There must be more guns, more jeeps, more boats to feed the gaping maw of our relentlessly demanding fighting forces and an ever-growing demand on the part of the Allies. It is probably not economically sound to erect more plants nor would it likely be feasible because our manpower supply is stretched to its utmost.

Already thousands of women have responded to the call of the factory. In many airplane plants they have established new efficiency records. Their fingers, long trained for needle-work and household tasks, quickly acquire the "knack" of assembling small units. American woman-power has responded to the "call to the factory." Thousands of girls and women have enlisted in various services, relieving men for the fighting front.

What faces American manufacturers today is greater efficiency in production, and one of the greatest means to this end is a calendar that will stay put; a calendar that can be depended upon with days and dates perpetually fixed and never changing; a well-planned system wherein all its

various time-units have banded together in a superb teamwork of practical efficiency.

Planning and thoroughness in manufacturing detail have made America the manufacturing and production marvel of the world. Possibly the efficiency of conveyers, of automatic equipment, of giant time-saving devices cannot be increased, or increased but little. But the efficiency of our calendar and the planning of our days can be increased and so ordered as to be a material aid in greater production volume and equally so in all postwar planning and the coming of peace.

But how will The World Calendar help increase America's war production? To understand this thoroughly, we must first know what The World Calendar is. It is a simple rearrangement of our present calendar so that all quarters are equal and alike. As a result all days and dates remain the same. Periods are instantly comparable inasmuch as this is a "fixed" and constant calendar.

In making up pay-rolls, in establishing production objectives, in making quotas and in establishing delivery dates, there are no extra Saturdays or Sundays to cope with. There are no wandering holidays to make uncontemplated long week-ends with attendant costly overtime charges.

In contrast, today the weeks differ, the months differ, there are constant adjustments that must be made week in and week out. This unending confusion adds to office time, it lends itself to errors and to miscalculations. People now devoting their time to checking these various calculations can be relieved and can devote their energies to more constructive work and worth-while ends.

Today, American industry faces the problem of greatly increased production efficiency. Today, the world demands an ever growing volume of those things which we have learned to produce with such speed. Today, the world at war must have greater volume with but little increased manpower. Today, the American manufacturer and the shipper must produce more efficiently to win the war so thoroughly begun.

Millions of people, people held in literal serfdom, wait America's answer to this demand for a greater stream of materials with which to bring life, liberty, happiness and health to millions now suffering the indignities of a captive people. The answer is increased efficiency and cooperation and in this The World Calendar can and will play an essential part when adopted.



CURRENT PRESS COMMENT

Shifting Easter Date Cause of Confusion

Waterbury (Conn.) Democrat

April 28, 1943

With Easter occurring on April 25, the latest date since 1886, comes renewed interest on the part of churchmen as well as business leaders toward a stabilization of this "wandering" feast-day.

Not since 1886, and not until 2038, will Easter again be celebrated at this late date. Once in every century, as in 1546, 1641 and 1736, has Easter fallen on April 25.

The peculiar rules by which the Easter is established were passed in 325 A. D. by the Council of Nicaea. By that decision, Easter falls on the first Sunday after the 14th day of the moon falling on or after the vernal equinox, which is the first day of spring. Because of this ruling, Easter came as early as March 22 in 1573, 1668, 1761, 1818, and not at all in our century.

The reason back of this method of selecting the Easter date is predicated on the celebration of the Jewish Passover; Christ having been at the Passover in Jerusalem when he was crucified.

Not only business and educational organizations have found the "wandering" Easter a severe handicap but churches as well are finding this dislocation difficult to reconcile with their general church activities and programs.

Steps have already been taken by churchmen toward the establishment of Easter on a definite Sunday in April.

A survey conducted in August 1934 by the United Press indicated that the members of the clergy answering the questionnaire favored a stabilized Easter at an average of more than 9 to 1.

The Universal Christian Council for Life and Work at Geneva, and the Federal Council of the Churches of Christ in America have considered this question. The former passed a resolution favoring the stabilization, and the latter is making a study of it.

In 1934 the Protestant Episcopal Church

endorsed in resolution the fixing of Easter on the second Sunday in April which, incidentally, would be April 8 in the proposed World Calendar of 12 months and equal quarters. In the minds of churchmen, historians and astronomers this date comes closest to the historical date of the Resurrection, assumed by scholars to have occurred April 9, 30 A. D.

Similar resolutions have been taken by the Methodist Church and the American Lutheran Church. The Eastern Orthodox Church, through its Western representative, has also expressed a desire for stabilization.

Although advocating only a civil calendar of 12 months and equal quarters, The World Calendar Association has assembled a considerable amount of data from churchmen in various sections of the world regarding their feeling as to the stabilization of Easter.

Two statements, coming directly and indirectly from the Vatican, indicate that the Roman Catholic Church is favorably disposed to such a movement.

In 1912 the late Pope Pius X said: "The Holy See declared that it made no objection but invited the civil powers to enter into an accord on the reform of the civil calendar, after which it would willingly grant its collaboration in so far as the matter affected religious feasts."

Hubert Forestier of the *Paris-Soir*, April 1936, reports a conversation with the late Cardinal Baudrillart, quoting the Cardinal as saying: "The problem is not new. It has existed since the origin of the Church. . . . A few years ago, Pius XI was inclined to admit the proposition. This question is, besides, absolutely free from the dogmatic point of view. . . . the Pope is of the opinion that the thing can be done and that there would be great advantages. . . ."

EXCERPTS AND REVIEWS

A Calendar Amendment

By HENRY W. SNYDER

From The Lutheran, published by the Board of Publication of the United Lutheran Church in America, Philadelphia, February 10, 1943

THE next question is, "Cannot something be done about it [Easter]?"

Yes, and something should be done. How should we like it if Christmas varied by 35 days, or if there were no Christmas in one year, and two in the next? The best solution to the problem we have seen so far is that proposed by The World Calendar Association, which suggests April 8 as the date to be fixed for Easter [as coming nearest the historical date, April 9]; and according to this new calendar that day would always happen on Sunday.

The World Calendar Association proposes that the year be divided into four equal quarters of 91 days each, 13 of which shall be Sundays and 78 weekdays or work-days. The first month in each quarter would have five Sundays, 31 days; the other two, four Sundays, or 30 days. This calendar would be perpetual, every year beginning on a Sunday. December 30 would be a Saturday, the 364th day. Then there would be another Saturday, a World Holiday, designated as W or Year-End Day. The new year would begin again on Sunday. In leap years, a similar day would be intercalated at the end of June, designated as another World Holiday, June W or Leap-Year Day.

Now the exact date of Easter when Christ arose is unknown; the traditional date of the crucifixion is April 7. April 8 comes about as near the traditional date for Easter as one can reach, and is a happy selection; it is just about midway between the present possible extremes on which the festival can fall. It occurs when spring is fairly under way; and thus gives a greater degree of assurance of good weather. If one may take into consideration finances—and even churches must do so to some extent at least—it is just close enough to the end of a quarter to permit

quarterly statements to reach the membership with the probability that delinquents will respond to the Easter urge to meet their pledges; perhaps even to bring them to the church, which most people attend at that season, if at no other. Comparative statistics would be fair comparisons of one year with another.

Can the calendar be changed? It has been changed. Julius Caesar had an astronomer named Sosigenes change it from a chaotic system to one that was reasonably accurate in 45 B.C. Later, another change was needed. The Julian year was 365¼ days; the solar year 365 days, 5 hours, 48 minutes, 46 seconds, a difference of only 11 minutes, 14 seconds. "A mere trifle," you say? Yes, but by 1582 Pope Gregory XIII found that the Julian calendar was ten days off from the solar year. He adopted the present Gregorian calendar, according to which every fourth year is leap year, except those at the end of the centuries; these must be divisible by 400 to be leap years. Thus 1900 was not a leap year; 2000 will be.

And will people agree to such a change? Calendar reform, like almost every other kind of reform, naturally meets with some opposition. The Julian did; and England did not adopt the Gregorian for 170 years after its inception, when 11 days had to be dropped.

But the change is on the way. Already favorable action has been given by the Protestant Episcopal Church, the Council of Bishops of the Methodist Church, and the Universal Christian Council for Life and Work at Geneva. Many leaders of the Eastern Orthodox Church are also in favor of the new calendar. Even the Roman Catholic Church has said that there exists no dogmatic objection to revision. Fourteen nations also have given their approval, embracing a wide variety of religious faiths, for example, China, Brazil, Norway, Greece, Turkey.

It is our hope that soon the United Lutheran Church, too, may throw the weight of its influence toward bringing about what seems a sane move.

Advocates Early Adoption

From The Controller, published by Controllers Institute of America, Brattleboro, Vt., April, 1943

THE World Calendar Association, Inc., is enlisting support for its proposed "World Calendar," a 12-month year containing four equal quarters, which provides for stabilizing holidays—because the same date of the month comes on the same day of the week every year. Under this calendar, for instance, Christmas will always fall on Monday. Every year, and every quarter, begins on Sunday. The standardization is obtained by inserting an extra day at the end of December, which is treated as an extra Saturday or "Year-End Day" and set aside as a holiday. To overcome the difficulty of leap year, a "Leap-Year Day" is inserted at the end of June—another extra Saturday.

According to Emerson Brewer, Director of the Association, the majority of leaders in the fields of retailing, insurance, manufacturing and banking have gone on record as favoring a more stable calendar, and many of them have endorsed The World Calendar. Their interest has been won by the fact that the proposed calendar lends itself to true comparisons of business accomplishments by previous months, periods and years—and also because it lends itself to orderly office procedure, constructive year-after-year planning, and to establishment of economical routine.

Mr. Brewer states that many national organizations are appointing committees to study calendar revision as it applies to their particular problems of accounting, sales or management.

"Consideration of calendar reform is especially timely now," Mr. Brewer pointed out, "because an international or inter-American conference on calendar reform should be held during 1943. The most logical year for The World Calendar to go into effect is 1945, because in both the present calendar and The World Calendar December 30, 1944, falls on Saturday. If the following day is designated as an extra Saturday—the first World Holiday—civilization would then be ready to initiate the new year and the new time-pattern with Sunday, January 1, 1945."

Fourteen nations already have endorsed

Canadian Manufacturer Sees Immediate Calendar Need

By S. J. GOLDSTEIN

Factory Supervisor, Montreal, Canada, January 2, 1943

THE World Calendar interests me very much for two reasons—outlined below—so much so that I would very much like to help in having it universally adopted.

The reasons are:

1. It would simplify my own work and put it on an entirely scientific basis. I am a supervisor at a local war plant. My work is mainly "Quality Control" which involves day-by-day charts and statistics.

Naturally, these charts and figures are of value only to indicate trends of quality in our products—that is, how they compare with the quality produced in the past.

And try to compare one month with another—or one quarter with another—with the present calendar. I have to make compensatory calculations every time I am asked for figures—and even then the comparison is spotty.

Believe me, I am more than a little interested and am prepared to help in every way possible, both from a scientific point of view, and because a "World Calendar" would help me considerably, personally.

2. "The World Calendar" particularly would apply in Canada. Look how well these Canadian holidays fall:

May 24 Victoria Day—Friday.

June 24 St. Jean Baptiste Day—chief French Canadian holiday—falls on a Sunday, the ideal day for parades.

July 1 Dominion Day—Canada's Independence Day will be always a Sunday.

Nov. 11 Remembrance Day—a Saturday.

These, besides Xmas, New Year's and Labor Day.

the new calendar, and its adoption awaits only international agreement. The World Calendar Association is incorporated in New York State, with headquarters in New York City.

FROM THE MAIL BAG

Practically all mathematicians and scientists favor The World Calendar. I am glad that the Association, of which I am a member, has endorsed it specifically.—T. R. Hollcroft, American Mathematical Society, Wells College, Aurora, N. Y.

A most commendable proposition; would be glad indeed to see it adopted. Would simplify business relations very much.—Elmer A. Wolfe, General Contractor, San Francisco, Cal.

It is impressive to see how many intelligent people are thinking and writing about this reform [The World Calendar]. In days like these it is good to know that constructive international work goes on, and I am sure your efforts will bear fruit. All good wishes for the success of your work.—Dorothea Kahn, Central News Office, *The Christian Science Monitor*, Chicago.

I have been interested in The World Calendar for many years.—Brig. Gen. Jefferson Randolph Kean, U.S.A., Ret.

The proposed calendar reform would be highly desirable for the University of California as well as the country in general.—Dr. Robert G. Sproul, Pres., Univ. of Cal., Berkeley.

I have long known of The World Calendar proposal; and I look upon it as so rational and so useful as to admit of no opposition. The only arguments against it are inertia, superstition, and temporary inconvenience; and had they prevailed the Julian calendar itself would never have come into existence.—Lewis Mumford, Amenia, New York.

As an educator in the field of statistics and accounting I have been sowing the seeds of calendar reform for many years without actually being identified with the organized movement. I have recently had occasion to analyze over 100 long monthly time series, a task which, believe me, would convince the most skeptical individual of the desirability of calendar reform. . . . I am in favor of getting behind this strong movement to put it over—and as

soon as possible. It is certainly a great improvement over the present calendar and should be appreciated by all who give the idea their thought.—Dr. Grant I. Butterbaugh, Assoc. Prof. of Statistics, Coll. of Economics and Business, Univ. of Wash., Seattle.

The problem of a World Calendar is most interesting. I have long believed that it would be in the long run a great saving of time and trouble if we had such a calendar. Many are the hours and days which I have spent in reducing monthly data to daily averages simply because our months are of different lengths.—Ellsworth Huntington, Yale University, New Haven, Conn.

I am heartily in sympathy with your movement, and wish it might be possible for you to get the proposed reform put into practical use. It seems to me the advantages of the kind of calendar which your Association endorses are too clear to need any argument.—John M. Glenn, Russell Sage Foundation, N. Y. C.

It is my opinion that the proposed calendar is very superior to that which is now cluttering up our affairs and I feel certain that the time is not very distant when this proposal will become our official calendar.—H. P. Fawcett, Dept. of Education, Ohio State Univ., Columbus.

As editor of *United Press Predate*, the only syndicated futures book for news men, I fully subscribe to your objections against the quirks and deficiencies of our present calendar, and I believe with you that The World Calendar would solve many difficulties which for no good reason most of us have come to accept as unavoidable.—Henry Platt, Editor, *United Press Predate*, New York City.

"A Perpetual World Calendar" would seem to be a solution to the many suggestions that have been made in regard to the revision of our calendar.—George M. Verity, Chairman, The American Rolling Mill Company, Middletown, Ohio.

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